Contraceptive Use Dynamics In The Philippines: Determinants Of Contraceptive Method Choice And Discontinuation

Elma P. Laguna
Anna Liza C. Po
Aurora E. Perez
Andrew Kantner

Population Institute
University of the Philippines
Quezon City, Philippines

Macro International Inc.
Calverton, Maryland USA

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Summary

In the Philippines, the challenge of encouraging more couples to use contraceptives is still imperative. However, this mission is no longer limited to the adoption of contraception, but also includes the selection of appropriate methods that suit client needs and the maintenance of effective use over time. It is in this light that an analysis of contraceptive use dynamics focusing on the determinants of method choice and discontinuation is useful to better guide policy and program directions.

Method Choice

In general, older women who want to stop childbearing are more likely to choose permanent methods (sterilization), while younger women, who more often want to space rather than limit births, usually prefer reversible methods (especially pills). Higher parity women, who are more likely to have the number of children they want, tend to favor modern methods (especially injections). Women who are legally married are more likely to use modern methods (especially natural methods, pills, and IUDs) than women living in consensual unions.

Catholic women are more likely to use the IUD and less likely to use injectables and traditional methods than nonCatholic women. Both modern and traditional method use is higher in urban than in rural areas. By region, use of the pill, the IUD, and injectables is highest in Mindanao, while use of condoms and female sterilization is highest in the National Capital Region (NCR). The reasons that injectable use is low in the NCR relative to other regions should receive further attention from program managers and service providers. The lower use of sterilization in Mindanao compared with other regions may partly reflect differences in accessibility and cultural or religious practices.

Women who are working outside the home and who reside in wealthier households are more likely to use modern methods. The poorest 20 percent of households are significantly less likely to use pills, sterilization, and natural methods than the richest 20 percent of households. Poorer households tend to have larger families and usually have fewer resources to allocate for the purchase of contraceptives.

Mass media and interpersonal communication are often considered powerful tools for information dissemination. However, these channels of communication have differing effects when used to reach target audiences. Results generally show that hearing or viewing a message about family planning through mass media channels such as radio, television, and newspapers has little systematic effect on modern method use. These findings suggest that the content and efficacy of mass media messages designed to enhance the knowledge and use of family planning and other reproductive health services should be reassessed.

More personal forms of interaction have more influence on choice of contraceptive method. Modern method use tends to be higher when there is more frequent spousal communication about family planning. The only exception is sterilization, for which more frequent spousal communication tends to discourage use. Male involvement and couple's decisionmaking in family planning are clearly areas that need further programmatic exploration.

Contact with fieldworkers and visits to health facilities tend to promote greater use of modern contraception, particularly reversible contraception. Medical personnel and health workers should take greater advantage of such opportunities to impart information about available contraceptive options. Facilities that are more accessible to clients also tend to promote greater use. Source of supply (public versus nonpublic) is important in predicting the use of injectables over other methods. Women who obtain care from public sector facilities are much more likely to use injectables, which implies that private sector providers are not promoting this method as effectively.

Contraceptive Discontinuation and Method Switching

Although there has been an increase in preference for modern methods in the Philippines in recent years, high method discontinuation and abandonment of use are also common, thus weakening the protection from unintended pregnancy that modern methods provide. The study shows that younger women are more likely to be interested in spacing than limiting their children and therefore may be less motivated to use contraception continuously. This highlights the fact that younger couples have different reproductive health needs and are likely to exhibit more irregular patterns of contraceptive use. A distinct set of policy interventions, programs, and messages should be developed for younger clients.

Despite claims from past studies that higher education leads to greater awareness, knowledge, and increased use of contraception, results from this analysis suggest that higher educational attainment does not necessarily ensure longer durations of use. In fact, more educated women tend to use contraceptives for shorter durations. One possible explanation for this finding is that by choosing to spend more time in school, women wish to delay marriage and childbearing. However, once they enter into union, they tend to have children more rapidly and use contraception for shorter durations. In a more positive light, results also show that more educated women tend to choose more effective methods.

Similarly, having the means to easily afford family planning services does not ensure continued and effective use. This study found that women in more advantaged households have higher discontinuation rates for pills and injectables. However, IUD and condom discontinuation is higher among women living in poorer households.

With regard to the contraceptive use of working women, lower discontinuation rates are noted for most methods, although only a small difference exists in the rates for IUD use between working and nonworking women (13.0 percent versus 14.7 percent). This difference is to be expected, as many Filipino women believe that with an IUD inserted, hard manual work is not advisable. This belief is held particularly among women in rural areas whose main occupation is agrarian farm work.

The provision of services to low-income couples should be given greater priority in the Philippine family planning program. Poorer households tend to have larger families and usually have fewer resources to allocate for the purchase of contraceptives. This study shows that efforts to identify those women who are in need of family planning services and to bring these services to them can lead to more productive outcomes.

Spousal communication on family planning affects the decision on whether to continue using a method. In some cases (e.g., pill use), frequent discussion of family planning issues between husband and wife lessens the probability of discontinuation. Likewise, disagreement between couples about the desired number of children increases the probability of discontinuation. Greater efforts are needed to promote male involvement in the country's reproductive health programs.

In terms of the mass media's effect on contraceptive use, it appears that radio contact may be somewhat effective in promoting prolonged use of most modern methods. Furthermore, women who have heard family planning messages on the radio (with the exception of IUDs) have lower discontinuation rates than women with no radio contact. The use of print media for family planning messages can also be effective for some methods. For example, this study shows that prolonged use of injectables is more likely to occur among women who have learned about family planning from posters and brochures. However, the impact of family planning messages through various media channels is generally weak and inconsistent.

One other variable that has a significant effect on the duration of use for pills and injectables is the ongoing effort to promote reproductive health at the local level through the local performance program

(LPP). Pill and injectable discontinuation is lower and durations of use longer in LPP areas. However, condom use is generally less effective in LPP areas, which may imply that the LPP program may not be giving adequate attention to services and information for male clients.

With regard to patterns of method switching after discontinuation, women who discontinue IUD and injectable use are likely to switch to another modern method, which suggests that they may be highly motivated to restrict fertility. However, it should be noted that many injectable users also discontinue the use of any method rather than switch to other modern methods. Pill users are more likely to say they have no need for contraception or to discontinue use rather than switch to modern or traditional methods. This result may be partly because many pill users are spacing births and may often discontinue to have a child. Former condom users are more likely to say they have no need for contraception, switch to traditional methods, or discontinue use rather than adopt a modern method.

1 Introduction

The Philippines ranks as the fifteenth most populous country in the world and eighth in the Asian region (DOH, 1996). Its population is expected to increase from 68.3 million in 1995 to 91.8 million by 2010, even if replacement fertility is attained by the year 2010 (NSO et al., 1999:32). For more than three decades, the Philippine family planning program has been implementing strategies aimed at managing the population in relation to the developmental needs of the country. The provision of family planning information and services is based on a policy of noncoercion and respect for religious and moral convictions. Emphasis is placed on the health benefits derived from practicing family planning. This is achieved by providing accurate and timely information consistent with the fertility intentions of couples and by broadening the range of available contraceptives appropriate for each stage of the reproductive lifespan (ESCAP, 1992:16).

Greater attention is now being given to the concerns of current users and potential users. By increasing contraceptive options, the family planning program can better accommodate the preferences of its clientele (Shah, 1991:617). There is also a need to encourage users to maximize contraceptive efficacy through continued use. Past research on contraceptive use has not focused extensively on why couples initially choose and later discontinue particular contraceptive methods. One possible explanation for this lack of research may be that policymakers have focused more on encouraging couples to accept any method of family planning. However, rapid increases in contraceptive prevalence have heightened the awareness that method choice and contraceptive discontinuation are important research and policy questions.

2 Family Planning Efforts in the Philippines: An Overview

Family planning was first introduced in the Philippines by the private sector in the early sixties. It was only through the Population Act of 1971 that family planning was integrated into the government's development plans (Perez and Tabije, 1996). As can be seen in Table 1, substantial gains have been achieved by the program, as is evident by the marked rise in contraceptive prevalence from 15.4 percent of currently married women in 1968 to 46.5 percent in 1998 (NSO et al., 1999). However, the tripling of contraceptive prevalence in the span of thirty years has not been sufficient to reduce fertility to replacement level (TFR=2.1). The Philippine total fertility rate (TFR) is still well above replacement level, falling to 3.7 in 1998 from 6.0 in 1970 (NSO et al., 1999). In general, the transition to low fertility has been slow in the Philippines, particularly in comparison with neighboring Asian countries.

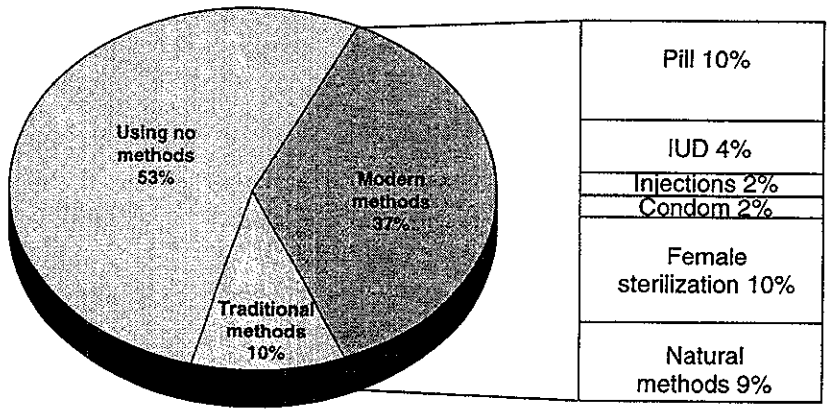
Table 1 Trends in Contraceptive Use, Philippines, 1968-1998

Survey	Modern methods	Traditional methods	Total
1968 National Demographic Survey	2.9	11.5	15.4
1973 National Demographic Survey	10.7	6.7	17.4
1978 Republic of the Philippines Fertility Survey	17.2	21.3	38.5
1983 National Demographic Survey	18.9	13.1	32.0
1988 National Demographic Survey	21.6	14.5	36.1
1993 National Demographic Survey	24.9	15.1	40.0
1996 Family Planning Survey[1]	30.2	17.9	48.1
1997 Family Planning Survey[1]	30.9	16.1	47.0
1998 National Demographic and Health Survey[1]	28.2	18.3	46.5

Sources: World Bank, 1991; NSO, 1996; NSO, 1997; NSO and Macro International Inc., 1994 (as cited in NSO, 1999)
[1] Based on currently married women 15-49

The 1998 National Demographic and Health Survey (NDHS) confirms that knowledge of family planning methods is high; 98 percent of all women know at least one family planning method. However, this awareness is not reflected in the level of contraceptive use. More than half of all currently married Filipino women were still not using any method of contraception in 1998. Among current users, 9.6 percent rely on traditional methods, while 36.9 percent use a modern method. Female sterilization is the most widely used modern method (10.3 percent), followed closely by pills (9.9 percent) (see Figure 1).

Figure 1 Use of Contraceptive Methods among Currrently Married Women 15-49, Philippines, 1998



Note: Natural methods include calendar/rhythm, lactational amenorrhea method, and mucus/billings/ovulation. This definition deviates from the classification used by the Department of Health as reflected in the 1998 NDHS report. The decision to include calendar/rhythm as a natural method rather than a traditional method was made to boost the number of natural method cases for analysis. Traditional methods include breastfeeding, withdrawal, and other.

Another programmatic issue of pressing concern in the Philippines is the high level of contraceptive discontinuation among users. The 1998 NDHS data show that two in five users discontinue use after the first year. Discontinuation is highest for condoms (60 percent), followed by injections (52 percent), withdrawal (46 percent), and pills (44 percent). As is evident from past surveys (NSO, and MI, 1994), side effects (health concerns), method failure, and the desire to become pregnant are commonly cited by respondents as reasons for discontinuing the use of contraception.

The challenge of encouraging more couples to use contraceptives is still imperative. However, this mission is no longer limited to the adoption of contraception, but also to the selection of appropriate methods that suit client needs and the maintenance of effective use over time. It is in this light that an analysis of contraceptive use dynamics focusing on the determinants of method choice and discontinuation is useful to better guide policy and program directions.

3 Contraceptive Method Choice

This analysis uses information from the 1998 National Demographic and Health Survey. The selection of variables to be included as possible determinants of contraceptive method choice is guided by the conceptual scheme developed by Bulatao (1989). He views contraceptive method choice as largely influenced by four dimensions: 1) *contraceptive goals* (spacing or limiting of children), 2) *contraceptive competence* (the ability to use methods effectively), 3) *contraceptive evaluation* (assessment of ethical and cultural influences affecting the use of contraception), and 4) *contraceptive access* (geographic, economic, and other aspects of accessibility).

In this study, *contraceptive goals* include fertility intent, age at the time of the survey, number of living children, and type of marital union. *Contraceptive competence* comprises the respondent's level of education, knowledge of the fertile period, and the frequency of spousal communication about family planning. *Contraceptive evaluation* refers to a woman's religious affiliation and region of residence. Finally, *contraceptive access* is composed of urban-rural residence, work status, household wealth status, exposure to family planning messages, visits by family planning fieldworkers in the past 12 months, visits to a health facility in the past 12 months, residence in an LPP province, source of supply for last contraceptive method, type of referral to source of supply, and travel time to source of supply. It should be noted that the last three variables can only be used to assess the use of modern methods since this information was only collected for current users.

Data analysis is limited to currently married women 15-49 years of age who were not pregnant at the time of the survey. These women were able to choose which method of contraception to use. Currently married women include those who are legally married and those living in consensual unions.

3.1 Differentials in Contraceptive Use

Method-specific patterns of contraceptive use are shown in Tables 2-5 in relation to measures of contraceptive goals, competence, evaluation, and access. The results are summarized below.

3.1.1 Contraceptive Goals

In the Philippines, women who do not want to have any more children (i.e., want to limit) are more likely to use contraception than women who want to space their next child (see Table 2). However, much of the difference between the two groups results from the greater use of natural and traditional methods by women who want to limit. This finding suggests that many women who wish to cease childbearing are not using methods that are well suited to their reproductive intentions and fertility regulation needs.

Young adults age 15-24 are less likely to use modern methods. Many younger women want to begin childbearing once they marry, so lower levels of use (especially for permanent methods of fertility regulation) are to be expected. However, older women are less likely to use pills and injectables (hormonal spacing methods) and are more likely to use sterilization.

3.1.2 Contraceptive Competence

Table 2 shows that there is a positive association between modern method use and education. Modern method use increases at higher levels of education. For the pill, IUD, and injectables, the highest level of use occurs among women who have had the most schooling. The use of modern natural family planning methods is also elevated among more educated women. A majority of nonusers have little or no education (elementary or less).

Discussion of family planning between husbands and wives appears to be positively related to modern method use. For most methods, the use of contraception increases with the frequency of discussion of family planning among couples. The one exception is female sterilization: Women who never discussed family planning with their husband (22.4 percent of all respondents) are more likely to use sterilization to limit childbearing. This finding is somewhat surprising given the nonreversibility of the method.

Table 2 Percent distribution of currently married women by current use of specific contraceptive methods, according to selected background characteristics, contraceptive goals, and competence, 1998

Background characteristics, contraceptive goals, and competence	All modern methods	Modern methods							Tradi-tional methods	Using no method	Total	Number
		Pill	IUD	Injec-tables	Con-dom	Female sterili-zation	Male sterili-zation	Natural methods				
Age of respondent												
15-24	24.1	13.7	3.2	3.1	0.8	0.2	-	3.2	9.4	66.4	100.0	1,212
25-34	39.1	14.7	4.7	3.2	1.9	6.2	-	8.4	11.3	49.6	100.0	3,315
35-49	39.0	4.5	2.9	1.4	1.6	17.1	0.3	11.1	8.3	52.7	100.0	3,810
Parity												
0-1	18.6	8.5	2.4	1.0	0.7	0.6	-	5.4	7.6	73.8	100.0	1,966
2-3	44.6	13.3	4.3	2.9	2.2	12.2	0.2	9.5	10.9	44.5	100.0	3,318
4+	40.2	7.2	3.8	2.6	1.6	14.5	0.1	10.4	9.5	50.2	100.0	3,051
Type of union												
Legal marriage	38.5	10.2	3.8	2.3	1.7	10.8	0.1	9.5	9.6	51.9	100.0	7,467
Consensual union	23.0	7.8	2.5	2.5	0.7	6.1	0.2	3.1	9.9	67.1	100.0	8,69
Education												
Elementary or below	30.4	8.1	2.8	2.3	1.1	9.8	0.2	6.0	9.2	60.4	100.0	2,924
High school	38.9	11.7	4.5	2.7	1.5	9.8	0.1	8.6	11.3	49.8	100.0	3,050
College or higher	42.4	9.8	3.8	1.9	2.4	11.5	0.0	12.8	8.0	49.7	100.0	2,362
Discussed family planning w/husband												
Never	24.0	2.1	1.4	0.6	0.6	15.1	0.3	3.8	3.5	72.5	100.0	1,863
Once or twice	38.4	10.9	3.9	2.9	1.5	9.6	0.1	9.5	11.0	50.6	100.0	3,237
More often	42.8	13.5	4.8	2.8	2.2	8.2	0.1	11.2	11.9	45.2	100.0	3,216
Fertility intent												
To space	25.6	11.8	3.3	2.2	1.2	-	-	7.2	9.0	65.4	100.0	2,652
To limit	33.4	11.1	5.0	3.1	2.1	-	-	12.2	12.2	54.4	100.0	4,286
Knowledge of cycle												
Correct	42.8	10.5	3.0	2.5	2.3	10.4	-	14.1	8.3	48.8	100.0	1,320
Incorrect	35.8	9.8	3.8	2.3	1.5	10.3	0.2	7.9	9.9	54.4	100.0	7,010

Women who correctly identify when they are most likely to be at risk of conception during their ovulatory cycle are more likely to use modern contraceptive methods, especially natural methods. However, since 84.1 percent of all respondents could not identify when they are most at risk during their cycle, the absolute number of women likely to be using natural methods incorrectly is substantial and may be responsible for many unwanted pregnancies.

3.1.3 Contraceptive Evaluation

As can be seen in Table 3, there is little overall variation between Catholic and nonCatholic women in the use of family planning methods. The greatest difference is in the use of natural methods, which tend to be favored by Catholic women.

Table 3 Percent distribution of currently married women by current use of specific contraceptive methods, according to selected sociodemographic characteristics, 1998

Sociodemographic characteristic	All modern methods	Modern methods							Tradi-tional methods	Using no method	Total	Number
		Pill	IUD	Injec-tables	Con-dom	Female sterili-zation	Male sterili-zation	Natural methods				
Residence												
Urban	40.7	10.7	3.4	2.3	1.9	12.6	0.1	9.6	10.0	49.3	100.0	4,222
Rural	33.0	9.1	4.0	2.4	1.3	7.9	0.2	8.1	9.3	57.8	100.0	4,114
Region												
NCR	38.8	10.6	1.8	0.6	3.1	12.4	-	10.3	10.6	50.6	100.0	1,297
Rest of Luzon	34.6	10.0	2.3	2.4	1.1	13.2	0.1	5.5	11.6	53.7	100.0	3,454
Ilocos	31.9	10.1	1.4	2.7	1.0	13.3	0.2	3.4	11.3	56.6	100.0	414
Cagayan Valley	41.9	16.4	5.2	4.6	-	12.3	0.3	3.4	6.2	51.5	100.0	322
Central Luzon	41.6	12.1	0.7	2.0	1.0	19.4	-	6.3	13.3	45.2	100.0	883
S. Tagalog	32.2	7.9	3.0	2.5	1.3	11.8	-	5.7	12.8	55.0	100.0	1,219
Bicol	25.6	8.1	2.7	1.0	1.2	5.4	0.2	6.9	10.8	63.6	100.0	481
CAR	34.8	6.7	2.2	3.7	2.2	14.9	-	4.5	6.7	59.0	100.0	135
Visayas	37.0	7.2	4.0	2.8	2.1	7.6	0.5	12.9	8.7	54.4	100.0	1,641
W. Visayas	37.2	8.5	2.7	3.0	1.4	8.6	0.6	12.3	7.8	55.0	100.0	627
C. Visayas	43.0	7.6	6.8	3.2	3.2	6.8	0.5	14.9	8.6	48.5	100.0	619
E. Visayas	27.1	4.3	1.8	1.8	1.0	7.3	0.3	10.6	10.4	62.5	100.0	395
Mindanao	39.5	11.6	7.2	3.0	1.2	6.0	0.1	10.5	6.3	54.2	100.0	1,943
W. Mindanao	39.7	15.7	6.1	2.0	1.7	4.1	-	9.9	4.1	56.3	100.0	343
N. Mindanao	46.4	13.9	10.2	3.1	1.4	5.1	-	12.9	7.5	46.1	100.0	295
S. Mindanao	48.4	14.5	9.4	3.5	1.4	6.8	-	12.8	6.8	44.8	100.0	572
C. Mindanao	38.8	8.1	7.3	3.3	0.7	8.8	0.4	10.3	6.2	54.9	100.0	273
ARMM	10.3	3.6	-	2.0	-	3.2	-	1.6	5.6	84.1	100.0	252
Caraga	41.1	8.7	6.7	3.8	1.4	7.7	-	12.5	7.7	51.4	100.0	209
Work Status												
Working	41.7	10.0	3.9	2.3	1.8	12.6	0.2	10.8	9.6	48.7	100.0	3,925
Not working	32.6	9.9	3.5	2.4	1.4	8.3	0.1	7.1	9.7	57.8	100.0	4,400
Wealth index												
Poorest 20 percent	26.5	8.7	2.7	2.9	0.9	4.2	0.1	7.0	8.3	65.2	100.0	1,537
20-40 percent	32.9	8.9	4.8	2.5	1.2	7.2	0.2	8.2	10.3	56.8	100.0	1,619
40-60 percent	40.4	12.3	4.6	2.3	1.6	11.4	0.3	8.0	10.8	48.8	100.0	1,586
60-80 percent	41.1	10.8	4.0	2.0	2.2	12.9	0.1	9.0	10.9	48.0	100.0	1,857
Richest 20 percent	45.8	9.5	2.9	2.2	1.8	15.8	0.1	13.6	7.2	46.9	100.0	1,291
Religion												
Catholic	37.4	9.8	3.9	2.2	1.5	10.5	0.1	9.3	9.5	53.1	100.0	6,748
Non-Catholic	34.8	10.5	2.9	2.9	2.0	9.3	0.1	7.1	10.3	54.8	100.0	1,587

There is considerable regional variation in the use of modern and traditional methods in the Philippines. Modern method use is highest in Mindanao (39.5 percent) and lowest in the areas of Luzon outside Metro Manila (34.6 percent). Pill and IUD use tend to be higher in Mindanao than in other regions. However, Luzon residents from Cagayan Valley have the highest overall use of pills and injectables. Central Luzon and the Cordillera Administrative Region (CAR) are the areas with the highest levels of female sterilization. Natural method use is slightly higher in the Visayas region than in other regions. Use of traditional methods is more common in the National Capital Region and the rest of Luzon than in other regions.

3.1.4 Contraceptive Access

Table 3 shows that women who are currently working are more likely to be using contraception. Female sterilization and natural methods appear to be especially favored by working women. Greater household wealth status (measured by household characteristics such as electrification; type of flooring and sanitation facilities; and assets such as radios, televisions, and telephones) is also associated with greater contraceptive use. This pattern is particularly pronounced among users of female sterilization. Natural method use is also more likely to occur among the richest 20 percent of households.

The results shown in Table 4 suggest that exposure to family planning messages from media sources such as radio, television, and newspapers is associated with greater use of modern methods. This correlation is especially true for female sterilization. The pattern does not occur for traditional methods.

Table 4 Percent distribution of currently married women by current use of specific contraceptive methods, according to exposure to family planning (FP) messages and contraceptive access, 1998

Exposure to FP messages, and contraceptive access	All modern methods	Modern methods							Traditional methods	Using no method	Total	Number
		Pill	IUD	Injectables	Condom	Female sterilization	Male sterilization	Natural methods				
EXPOSURE TO FAMILY PLANNING MESSAGES												
Radio												
Yes	38.8	10.1	4.0	2.6	1.6	11.4	0.2	9.0	9.3	51.9	100.0	5,716
No	32.6	9.6	2.9	1.8	1.7	8.0	-	8.7	10.5	56.9	100.0	2,611
Television												
Yes	40.4	10.6	3.9	2.5	1.8	12.1	0.2	9.2	10.1	49.5	100.0	5,623
No	29.6	8.6	3.2	2.0	1.2	6.5	0.0	8.1	8.7	61.7	100.0	2,705
Newspaper												
Yes	41.6	10.2	3.7	2.2	1.9	13.7	0.2	9.8	9.1	49.4	100.0	3,545
No	33.4	9.8	3.7	2.5	1.4	7.8	0.1	8.1	10.1	56.5	100.0	4,783
Poster												
Yes	42.9	10.9	4.2	3.0	1.9	12.3	0.2	10.5	8.6	48.5	100.0	3,778
No	31.8	9.1	3.3	1.8	1.4	8.6	0.1	7.5	10.6	57.6	100.0	4,546
Brochure												
Yes	43.8	10.8	4.2	2.9	1.8	12.7	0.2	11.1	8.8	47.4	100.0	2,953
No	33.1	9.4	3.4	2.1	1.5	8.9	0.1	7.6	10.1	56.8	100.0	5,368
Slogan												
Yes	40.2	10.8	4.1	2.6	1.9	11.0	0.2	9.8	10.3	49.5	100.0	5,618
No	29.9	8.1	2.9	1.8	1.1	8.9	0.1	7.0	8.4	61.7	100.0	2,710
CONTRACEPTIVE ACCESS												
Visited by FP worker												
Yes	44.2	12.8	5.7	4.1	2.2	10.0	-	9.4	10.5	45.4	100.0	1,520
No	35.2	9.3	3.2	2.0	1.5	10.4	0.2	8.7	9.5	55.3	100.0	6,815
Visited health facility												
Yes	40.2	12.5	4.6	3.5	1.8	8.8	0.1	8.8	9.9	49.9	100.0	4,872
No	32.2	6.3	2.4	0.8	1.3	12.3	0.1	9.0	9.3	58.5	100.0	3,457
LPP coverage												
LPP area	38.2	10.5	4.2	2.9	1.4	9.7	0.2	9.4	9.2	52.6	100.0	5,629
Non-LLP area	34.0	8.7	2.7	1.2	2.1	11.6	0.1	7.8	10.6	55.4	100.0	2,708

Interpersonal contact resulting from visits by family planning workers in the past 12 months tends to promote greater use of modern methods, especially the pill. Likewise, visiting a health facility in the past 12 months also appears to increase the use of most modern methods. The one notable exception is female sterilization, for which use is higher among women who have not visited a health facility. Women who have been sterilized may have fewer reproductive health needs and therefore may be less likely to visit health facilities.

The local performance program project, which is being funded by the U.S. Agency for International Development (USAID) and implemented by the Department of Health (DOH), aims to improve the accessibility and quality of family planning services with the objective of increasing the overall use of modern contraceptive methods. Grants are being given to local government units (LGUs) at the provincial level to further enhance the provision of family planning services in each LPP area. The results from Table 4 show that modern method use is slightly higher in LPP areas compared with non-LPP areas (38.2 percent versus 34.0 percent). Reversible methods of contraception tend to be higher in LPP areas, while female sterilization is more prevalent in non-LPP areas.

The findings shown in Table 5 can only be computed for current users of family planning. The results show that a high percentage of pill and condom users obtain care from private pharmacies, while female sterilization procedures are most often performed at private institutions or nongovernmental organizations (NGOs). Women who choose to use pills, IUDs, and injectables are mostly referred to supply sources by public institutions. However, private facilities and friends or relatives are the most important referral sources for female sterilization, which suggests that public institutions may not be doing as much as they could to promote the use of sterilization.

Table 5 Percent distribution of currently married women who are using a modern contraceptive method by specific method, according to accessibility, 1998

	Modern methods								
Accessibility	Pill	IUD	Inject-ables	Condom	Female sterili-zation	Male sterili-zation	Natural methods	Total	Number
Source for last method									
Public	37.5	14.8	10.6	3.3	33.2	0.3	0.3	100.0	1,681
Private/NGO	13.3	11.4	3.6	1.4	67.4	1.4	1.4	100.0	414
Private pharmacy	66.8	0.5	-	32.6	-	-	-	100.0	190
Other	25.0	15.0	3.3	18.3	28.3	-	10.0	100.0	60
Who referred to source									
Public	40.6	15.0	10.7	3.6	29.2	0.4	0.5	100.0	795
Private	34.4	11.6	5.6	1.4	45.6	0.9	0.5	100.0	216
Friend/Relative	31.3	12.6	6.8	2.9	45.4	0.1	0.9	100.0	682
No one	35.7	10.6	8.5	13.2	31.0	0.4	0.7	100.0	554
Other	21.0	16.0	5.0	9.0	46.0	2.0	1.0	100.0	101
Travel time to source									
0-14 min	54.3	11.5	11.9	7.1	14.1	0.1	0.9	100.0	773
15-29 min	38.0	12.2	8.1	5.7	34.1	0.8	1.0	100.0	384
30-59 min	23.0	14.4	7.4	7.4	47.0	0.5	0.4	100.0	557
60 min +	21.2	14.3	4.9	2.5	56.0	0.8	0.5	100.0	638

As can also be seen in Table 5, greater accessibility to a service provider (measured in relation to travel time) tends to promote greater levels of use. This pattern is particularly notable for pills, injectables, and condoms. However, use levels for methods that are dependent on travel to clinics (e.g., IUDs and female sterilization) rise as travel time increases. The findings reflect the ability of women who prefer IUD and sterilization to meet the time and monetary costs of these clinic-based methods.

3.2 Multivariate Analysis of Contraceptive Method Choice

In deciding which method to use, clients are faced with many options. In this analysis, these choices are classified into seven categories; namely, pills, IUDs, injectables, female sterilization, modern natural methods, traditional methods, and no method. Since dependent variables in this analysis can have up to seven categories, multinomial logistic regression is employed. Multinomial logistic regression is derived from the binary logistic regression model, but it has the capability of analyzing a polytomous (more than two category) dependent variable. The results are presented in terms of the odds of change occurring in a dependent variable resulting from a unit change in an independent variable (defined as either continuous or categorical measures).

Five models have been constructed that assess the principal choices facing clients when deciding which method to use; namely,

Model 1: Current Modern or Traditional Method Use versus Nonuse

Model 2: Current Use for Individual Methods versus Nonuse[1]

Model 3: Hormonal Methods (Pill and Injectables) versus IUD

Model 4: Modern Reversible Methods (Pill, Injectables, and IUD) versus Female Sterilization

Model 5: Current Modern Methods versus Natural Methods

The results from these models are summarized below. Odds ratios for each model are presented in Tables 6-10.

3.3 Principal Findings

Model 1: Current Modern or Traditional Method Use versus Nonuse

As can be seen in Table 6, the odds of using modern methods compared with nonuse are higher among women with greater contraceptive competence; namely, women with more education, better knowledge of reproductive physiology, and greater spousal communication. The frequency of spousal communication is especially important since it more than doubles the likelihood of use of a modern contraceptive method.

Women with larger families are more likely to use modern methods. Women who are legally married are 80 percent more likely to be using a modern contraceptive method than are women in consensual unions. This finding implies that women who are not legally married may be at greater risk of having unwanted

[1] The individual methods in this model include the pill, IUD, injectables, female sterilization, and natural methods. Although the population program has actively promoted the use of condoms, this method was dropped from the analysis due to an insufficient number of cases.

pregnancies and may be relatively underserved by the family planning program. A possible explanation for this difference in the use of modern methods is that women who are not legally married may be reluctant to seek clinical advice on contraception.

Table 6 Model 1—Odds ratios for current use of modern and traditional family planning (FP) with nonuse as reference category, by selected characteristics, 1998

Characteristic	Modern/ None	Traditional/ None
Education†	1.042*	1.010
Age†	0.995	0.976*
Number of living children†	1.147*	1.153*
Urban vs. rural	1.239*	1.263*
Working vs. not working	1.327*	1.295*
Legal vs. consensual union	1.803*	1.290
Correct vs. incorrect knowledge of ovulatory cycle	1.166*	0.904
Catholic vs. non-Catholic	0.997	0.780*
Region (vs. NCR)		
Mindanao	0.991	0.527*
Visayas	0.810	0.684*
Rest of Luzon	0.853	1.020
Wealth (vs. richest 20 percent)		
Poorest 20 percent	0.540*	1.039
20-40 percent	0.689*	1.280
40-60 percent	0.911	1.322
60-80 percent	0.889	1.465*
Exposure to FP messages		
Radio	0.965	0.752*
Television	1.111	1.234
Newspaper	0.869*	0.903
Poster	1.101	0.801
Brochure	1.129	1.062
Slogan	1.111	1.213*
Discussed FP w/husband (vs. never)		
Once or twice	2.223*	4.140*
More often	2.647*	5.281*
Contraceptive access		
Visited by FP worker	1.282*	1.242*
Visited health facility	1.197*	0.973
LPP or non-LPP area	1.308*	1.035
Cox and Snell R^2**	0.120	
Number	8,336	

† Treated as continuous variables

* Significant at $P<0.05$

** Cox and Snell $R^2=1-[L(0)/L(B)]^{2/N}$ where L(0) is the likelihood of predicting categorical contrasts of the dependent variable with the constant (0) and L(B) is the predicted likelihood for the full model containing all independent variables, and N is the sample size. This "pseudo" R^2 measures the proportion of variance explained by this multinomial logistic regression model.

Measures of contraceptive accessibility are also important in promoting modern method use. Women who live in urban areas and in LPP provinces are more likely to use modern methods. Urban residence increases the likelihood of modern method use by 24 percent and LPP residence raises the odds by 31 percent. Economic status also appears to be an important predictor of modern method use. Working women are 33 percent more likely to use modern methods. In addition, women residing in the poorest 20 percent of households are 46 percent less likely to use modern methods compared with women in the richest 20 percent of households. This finding suggests that poorer households have greater difficulty paying for contraceptives and are more inclined to allocate scarce resources for basic needs.

Other accessibility variables that measure programmatic activity (i.e., visited by a family planning worker and visited a health facility in the previous 12 months) are important factors in promoting the use of modern methods. However, contact with information about family planning through various media channels is generally not important in promoting the use of modern contraception. In fact, reading information about family planning in newspapers is actually associated with lower modern method use.

The likelihood of using traditional methods is lower among older women, Catholic women, and women residing in Mindanao and Visayas compared with their NCR counterparts. Family planning messages heard over the radio also tend to decrease the use of traditional methods. However, this does not translate to preference for more effective methods. It is interesting to note that the frequency of spousal communication is also important in promoting traditional method use. Couples who discuss family planning more than once or twice (more often) are 428 percent more likely to use traditional methods as opposed to using no method.

Model 2: Current Use of Individual Methods versus Nonuse

Pills versus Nonuse. Table 7 shows that the likelihood of pill use rises significantly with greater parity and among women who are legally married. Younger women exhibit greater preference for pills, which is likely a reflection of spacing rather than limiting intentions. Women living in Visayas and the rest of Luzon are less likely to choose pills over nonuse compared with women from NCR.

In terms of contraceptive access, it is not surprising that women who reside in urban areas and who are currently working are also more likely to use pills. One reason may be the convenience this method offers to women who are more exposed to opportunities outside the home. In addition, women who belong to low-income households are less likely to use pills. For example, women residing in the poorest 20 percent of households are 37 percent less likely to use pills compared with women from the richest 20 percent of households.

Media contact has not been shown to be important in promoting pill use. In fact, women who read about family planning in the newspaper are actually less likely to use the pill, the IUD, injectables, and natural methods. Interpersonal exposure to family planning messages—i.e., visits by family planning workers, visits to a health facility, and being in an LPP province—tends to be more effective in promoting pill use. This finding is not surprising since in these circumstances women are more exposed to intensive family planning promotion from medical personnel and health workers who can explain the benefits of using pills. Furthermore, women who travel to a health facility may be more motivated to prevent pregnancy and therefore can be expected to be more accepting of family planning.

In relation to contraceptive competence, pill use is five to seven times higher if couples discuss family planning more frequently. More frequent communication between husband and wife affords greater opportunity to plan a better family life. It is also an occasion to talk about and consider available contraceptive alternatives.

Table 7 Model 2—Odds ratios for current use of specific modern family planning (FP) methods with nonuse as reference category, by selected characteristics, 1998

Characteristic	Pill/ None	IUD/ None	Injectables/ None	Sterilization/ None	Natural/ None
Education†	1.009	1.069*	1.003	1.001	1.137*
Age†	0.918*	0.958*	0.902*	1.072*	1.013
Number of living children†	1.164*	1.166*	1.400*	1.125*	1.161*
Urban vs. rural	1.345*	1.116	1.733*	1.377*	1.073
Working vs. not working	1.410*	1.400*	1.483*	1.302*	1.341*
Legal vs. consensual union	1.993*	1.748*	1.232	1.565*	3.105*
Correct vs. incorrect knowledge of ovulatory cycle	1.089	0.827	1.257	0.965	1.675*
Catholic vs. non-Catholic	0.890	1.538*	0.690*	0.928	1.156
Region (vs. NCR)					
Mindanao	0.789	5.056*	3.560*	0.635*	0.936
Visayas	0.419*	2.340*	2.605*	0.733	0.987
Rest of Luzon	0.707*	1.466	3.445*	1.256	0.510*
Wealth (vs. richest 20 percent)					
Poorest 20 percent	0.626*	0.592	0.656	0.365*	0.620*
20-40 percent	0.674*	1.080	0.601	0.605*	0.727*
40-60 percent	1.070	1.489	0.721	0.866	0.774
60-80 percent	1.012	1.230	0.779	0.873	0.719*
Exposure to FP messages					
Radio	0.845	1.139	1.127	1.140	0.810*
Television	1.069	1.085	1.256	1.305*	0.904
Newspaper	0.813*	0.737*	0.590*	1.148	0.780*
Poster	0.965	0.967	1.423	1.220	1.094
Brochure	1.179	1.209	1.356	1.023	1.252
Slogan	1.156	1.276	1.223	0.980	1.040
Discussed FP w/husband (vs. never)					
Once or twice	5.601*	2.859*	4.507*	1.131	3.809*
More often	7.217*	3.178*	3.798*	1.100	4.995*
Contraceptive access					
Visited by FP worker	1.338*	1.300	1.517*	1.240*	1.132
Visited health facility	1.623*	1.612*	3.600*	0.949	0.886
LPP or non-LPP area	1.659*	0.973	1.549	1.082	1.406*
Cox and Snell R^2			0.266		
Number			8,336		

† Treated as continuous variables
* Significant at P<0.05

IUD versus Nonuse. IUD use is more likely among younger respondents, among women with higher parity, and among legally married women. Measures of contraceptive competence are also important in predicting IUD use. For example, more educated women and couples who discuss family planning with greater frequency are more likely to use IUDs. IUD use is also higher among Catholic women and women residing in Mindanao and Visayas compared with NCR (which probably reflects the promotion of IUDs in these regions). However, there are no significant differences in IUD use between urban and rural areas.

In terms of other accessibility measures, visiting a health facility increases the likelihood of choosing an IUD. However, home visitation by a family planning worker does not increase the odds of choosing an IUD, which suggests that fieldworkers could be doing a more effective job in referring women to IUD services. Information-education-communication (IEC) messages through various media channels have no significant effect on promoting IUD use. As noted for pills, family planning information from newspapers significantly reduces the likelihood of using an IUD. Obtaining an IUD may not appear to be a simple procedure to some clients and probably requires effective client-provider interaction. Finally, the likelihood of choosing an IUD is not significantly higher in LPP provinces, suggesting that efforts to promote IUD use in LPP areas has not met with much success.

Injectables versus Nonuse. Injectables are more likely to be used by younger, higher parity women, urban dwellers, working women, and non-Catholics (the only method for which non-Catholics have a significantly greater likelihood of use than Catholics). Injectable use is also two to three times greater in Mindanao, Visayas, and the rest of Luzon than in NCR. As in the case of IUDs, residing in an LPP province is not associated with a significantly greater likelihood of use. It would appear that more could be done to promote the use of injectables in the Metro Manila area and in LPP provinces.

The likelihood of using injectables also rises with greater fieldworker contact and health facility visitation. As in the case of other modern methods, family planning messages read in newspapers are associated with lower injectable use. Other media channels, while not discouraging the use of injectables, appear to be ineffective in promoting the use of the method.

Finally, in terms of contraceptive competency, the frequency of spousal communication allows for greater use of injectables. For example, couples who discuss family planning more than once or twice (more often) have a 280 percent greater likelihood of using injectables than the nonuse of a method.

Female Sterilization versus Nonuse. Older, higher parity women are more likely to have had the number of children they want. They are also more exposed to having higher risk pregnancies. Therefore, they may be more likely to choose sterilization than younger women. Women who are legally married are also more likely to choose sterilization. The likelihood of using sterilization is 36 percent lower in Mindanao than in NCR, which may partly reflect differences in the availability of sterilization services and differences in cultural or religious status between these two regions.

With regard to contraceptive accessibility, urban dwellers, working women, women who have seen a family planning message on television, and women who have been visited by a family planning worker in the past 12 months are also more likely to choose sterilization. However, the poorest 20 percent of households are much less likely to undergo this procedure (64 percent less likely compared with the richest 20 percent of households), a result that may partly stem from the high cost of sterilization. Women who were visited by family planning workers in the past 12 months are more likely to choose sterilization, while visits to health facilities in the past 12 months show no such effect. In addition, residence in an LPP province does not increase the likelihood that women will opt for sterilization.

There is no significant relationship between the frequency of spousal communication about family planning and the decision to use female sterilization. This result suggests that women who never discuss family planning with their partner are just as likely to use sterilization as women who have frequent spousal communication.

Natural Methods versus Nonuse. Women are more likely to choose natural methods if they have more children and are in legal marriages as opposed to consensual unions. Measures of contraceptive competence are also important in accounting for the decision to use natural methods. Aside from the positive effect that frequent spousal communication has on the adoption of natural methods, more highly educated

women and women with correct knowledge of the pregnancy risk during the ovulatory cycle are more likely to use natural methods. Since women who use natural methods are more likely to have received instruction on the timing of maximum pregnancy risk, it is not surprising that natural method users have greater knowledge of basic reproductive physiology. Furthermore, more educated women may have more knowledge of the possible side effects of the most efficient methods and therefore decide to use natural methods (Zablan et al., 1989:70).

Natural method use is lower among women residing in poorer households (38 percent lower in the poorest 20 percent of households compared with the richest 20 percent of households) and 34 percent higher in households where women are working outside the home. Natural methods are also less likely to be used if family planning messages have been seen on television or read in the newspaper. As is the case for other modern methods, no IEC media contact variable has a measurable effect on the level of natural method use.

Residence in an LPP province is associated with a 41 percent greater likelihood of using natural methods. This finding is somewhat unexpected given the LPP goal of promoting the use of more efficient modern methods such as IUDs, injectables, and female sterilization.

Model 3: Hormonal Methods (Pill and Injectables) versus IUD

Table 8 presents odds ratios that account for the choice of hormonal methods of contraception (pills and injections) compared with IUDs. The odds of using pills rather than IUDs are also shown in Table 8. The results show that younger women are more likely to choose pills and injectables over IUDs, while older women prefer pills to injectables. Higher parity women prefer injectables to IUDs and pills. More educated women are less likely to choose pills to IUDs, but show no preference for injectables over IUDs or pills over injectables. Furthermore, Catholic women are less likely to prefer pills and injectables to IUDs, but show no preference for pills over injectables.

In comparison with women in the National Capital Region, women in other regions are less likely to prefer pills to IUDs and injectables. For example, compared with NCR respondents, women in Mindanao are 87 percent less likely to prefer pills to IUDs and women in Visayas are 83 percent less likely to favor pills over injectables. The strong preference for pills in NCR may result partly from the concentration of younger couples in Metro Manila and programmatic supply factors.

Women who reside in LPP provinces are 70 percent more likely to prefer pills to IUDs, but do not favor injectables over IUDs or pills over injectables. By source of supply, women who obtain services from public providers are 115 percent more likely to prefer injectables to IUDs and 67 percent less likely to prefer pills to injectables. In other words, women who use public sector facilities are more likely to choose injectables compared with women who obtain family planning services from private facilities. However, the source of referral (public, private, friend/relative, and no one) is not a significant determinant of hormonal method use in relation to IUDs.

Another accessibility measure, travel time to source of supply, is important in predicting the use of pills and injectables over IUDs. Women who live within 0-14 minutes of their service provider are 230 percent more likely to choose pills over IUDs and 180 percent more likely to prefer injectables to IUDs. This finding suggests that more women might choose IUDs if access to the method was improved relative to pill and injectable services.

Table 8 Model 3—Odds ratios for current use of hormonal methods of family planning (FP) with IUD as reference category by selected characteristics, 1998

Characteristic	Pill/ IUD	Injectables/ IUD	Pill/ Injectables
Education†	0.918*	0.939	0.977
Age†	0.947*	0.907*	1.045*
Number of living children†	0.972	1.389*	0.700*
Urban vs. rural	1.044	1.514	0.689
Working vs. not working	0.903	1.018	0.887
Legal vs. consensual union	1.059	0.585	1.811
Correct vs. incorrect knowledge of ovulatory cycle	1.390	1.357	1.025
Catholic vs. non-Catholic	0.601*	0.482*	1.245
Region (vs. NCR)			
Mindanao	0.131*	0.511	0.256*
Visayas	0.149*	0.896	0.166*
Rest of Luzon	0.360*	1.574	0.229*
Wealth (vs. richest 20 percent)			
Poorest 20 percent	1.195	0.818	1.460
20-40 percent	0.630	0.448*	1.404
40-60 percent	0.668	0.324*	2.063*
60-80 percent	0.797	0.481*	1.656
Exposure to FP messages			
Radio	0.805	1.174	0.685
Television	0.878	1.035	0.848
Newspaper	1.152	0.769	1.499
Poster	0.979	1.466	0.668
Brochure	0.904	1.089	0.830
Slogan	0.851	0.899	0.946
Discussed FP w/husband (vs. never)			
Once or twice	2.179*	1.959	1.112
More often	2.679*	1.615	1.659
Contraceptive access			
Visited by FP worker	1.054	1.141	0.924
Visited health facility	1.165	2.523*	0.462*
LPP or non-LPP area	1.705*	1.526	1.117
Public vs. nonpublic source	0.715	2.151*	0.332*
Referral (vs. public)			
Private	0.957	0.945	1.013
Friend/Relative	0.786	0.860	0.914
No one	1.002	1.466	0.683
Travel time (vs. 60+ min.)			
0-14 min	3.304*	2.802*	1.179
15-29 min	2.015*	1.853	1.087
30-59 min	1.129	1.525	0.740
Cox and Snell R^2		0.204	
Number		8,336	

† Treated as continuous variables
* Significant at P<0.05

Model 4: Modern Reversible Methods (Pill, Injectables, and IUD) versus Female Sterilization

Findings presented in Table 9 show that older women are more likely to prefer permanent contraception (sterilization) to modern reversible methods (pills, injectables, and IUDs). This preference is not surprising since older women may have already achieved the number of children they desire and are therefore more motivated to cease childbearing.

Table 9 Model 4—Odds ratios for current use of reversible methods of family planning (FP) with sterilization as reference category, by selected characteristics, 1998

Characteristic	Pill/ Sterilization	IUD/ Sterilization	Injectables/ Sterilization
Education†	0.956	1.039	0.969
Age†	0.797*	0.838*	0.767*
Number of living children†	0.900	0.954	1.305*
Urban vs. rural	0.703	0.699	1.020
Working vs. not working	0.835	0.921	0.920
Legal vs. consensual union	0.729	0.726	0.390*
Correct vs. incorrect knowledge of ovulatory cycle	1.121	0.834	1.144
Catholic vs. non-Catholic	1.310	2.107*	1.049
Region (vs. NCR)			
Mindanao	0.938	7.142*	3.789*
Visayas	0.418*	2.989*	2.628
Rest of Luzon	0.358*	0.963	1.571
Wealth (vs. richest 20 percent)			
Poorest 20 percent	2.470*	1.876	1.764
20-40 percent	1.088	1.656	0.807
40-60 percent	1.035	1.529	0.531
60-80 percent	1.191	1.413	0.754
Exposure to FP messages			
Radio	0.804	0.945	1.112
Television	0.677	0.781	0.764
Newspaper	0.725	0.624*	0.480*
Poster	0.676	0.689	1.016
Brochure	1.421	1.510	1.772*
Slogan	0.930	1.133	0.990
Discussed FP w/husband (vs. never)			
Once or twice	4.648*	2.486*	3.660*
More often	6.066*	2.618*	3.231*
Contraceptive access			
Visited by FP worker	1.016	0.950	1.103
Visited health facility	2.564*	2.242*	5.473*
LPP or non-LPP area	1.499	0.897	1.345
Public vs. nonpublic source	0.734	1.009	2.285*
Referral (vs. public)			
Private	0.686	0.663	0.690
Friend/Relative	0.514*	0.666	0.605
No one	1.126	1.050	1.670
Travel time (vs. 60+ min)			
0-14 min	18.632*	5.170*	14.903*
15-29 min	3.653*	1.685*	3.095*
30-59 min	1.865*	1.521	2.259*
Cox and Snell R^2		0.540	
Number		8,336	

† Treated as continuous variables
* Significant at P<0.05

Preference for female sterilization over pills is more likely among women residing in Visayas and the rest of Luzon than among women in NCR. Women from Visayas and the rest of Luzon are 58 percent and 64 percent less likely to prefer pills to sterilization compared with women in NCR. This finding again highlights the apparent preference for pills in NCR. However, women from Mindanao and Visayas are more likely to prefer IUDs and injectables to sterilization compared with women residing in NCR.

As can be seen in Table 9, there is some evidence that economic considerations play a role in the decision to use permanent methods of contraception. Women in the poorest 20 percent of households are 147 percent more likely to choose pills over sterilization compared with women from the richest 20 percent of households. However, there are no significant wealth effects when contrasting IUD and injectable use with sterilization.

Residence in an LPP province does not have any effect on women's preference for reversible over permanent methods of contraception. The source of supply for family planning services (public versus nonpublic) also tends to be a weak predictor, although women who obtain care from public providers are 128 percent more likely to choose injectables over sterilization. This result suggests that the public sector may currently be a more effective (and cheaper) provider of injectable contraception. In addition, shorter travel times to service providers increase the odds of choosing reversible over permanent methods of contraception. This pattern is especially true when contrasting pills and injectables with sterilization. Women who are highly motivated to limit their fertility are clearly willing to travel greater distances for services.

Another accessibility measure that increases the likelihood of choosing reversible methods over sterilization is health facility visitation. The odds of preferring reversible methods of contraception are two to five times greater if women have visited a health facility in the past 12 months. Somewhat surprisingly, contact with fieldworkers does not increase the odds of choosing reversible contraception, which implies that fieldworkers are not unduly motivating clients to use nonclinical rather than clinical methods of contraception.

As a channel of dissemination of family planning messages, newspapers are more effective in encouraging use of permanent than reversible methods. This finding may be because newspapers more than other media channels contain more comprehensive and detailed information about the means of limiting births than about spacing births.

Women are also more likely to choose reversible methods rather than sterilization if there is more frequent spousal communication about family planning. As noted previously, women appear more likely to choose sterilization if they do not discuss family planning with their husbands.

Model 5: Current Modern Methods versus Natural Methods

Table 10 reports that older women are more likely to prefer natural methods to pills, IUDs, injectables, and sterilization. More highly educated women are also more inclined to choose natural methods over other modern methods. In addition, women who are legally married and who have correct knowledge of pregnancy risk during the ovulatory cycle are more likely to prefer natural methods.

Women residing in Mindanao, Visayas, and the rest of Luzon tend to prefer IUDs, injectables, and sterilization to natural methods in comparison with women in the National Capital Region. However, there is no evidence that women in any region outside NCR prefer pills to natural methods. These results are due to the relatively high use of modern methods in certain regions (e.g., IUDs in Mindanao and injectables in Mindanao and the rest of Luzon) and the popularity of natural methods in Metro Manila.

Table 10 Model 5—Odds ratios for current use of selected modern family planning (FP) methods with natural methods as reference category, by selected characteristics, 1998

Characteristic	Pill/ Natural	IUD/ Natural	Injectables/ Natural	Sterilization/ Natural
Education†	0.881*	0.937*	0.887*	0.885*
Age†	0.875*	0.922*	0.851*	1.087*
Number of living children†	0.962	1.012	1.309*	0.988
Urban vs. rural	1.273	1.027	1.604*	1.319*
Working vs. not working	1.034	1.045	1.074	1.023
Legal vs. consensual union	0.560*	0.490*	0.328*	0.704
Correct vs. incorrect knowledge of ovulatory cycle	0.645*	0.492*	0.703	0.548*
Catholic vs. non-Catholic	0.869	1.347	0.662	0.816
Region (vs. NCR)				
Mindanao	0.785	5.413*	3.707*	0.780
Visayas	0.373*	2.296*	2.528	0.743
Rest of Luzon	1.331	2.936*	6.776*	2.712*
Wealth (vs. richest 20 percent)				
Poorest 20 percent	1.015	0.932	1.020	0.710
20-40 percent	0.837	1.328	0.763	0.917
40-60 percent	1.370	1.912*	0.906	1.197
60-80 percent	1.448*	1.708*	1.041	1.224
Exposure to FP messages				
Radio	1.070	1.372	1.470	1.563*
Television	1.079	1.189	1.246	1.435*
Newspaper	1.007	0.906	0.712	1.432*
Poster	0.830	0.870	1.278	1.081
Brochure	0.958	1.012	1.154	0.813
Slogan	1.116	1.261	1.109	1.078
Discussed FP w/husband (vs. never)				
Once or twice	1.437	0.745	1.272	0.284*
More often	1.406	0.604	0.755	0.215*
Contraceptive access				
Visited by FP worker	1.202	1.153	1.381	1.140
Visited health facility	1.993*	1.796*	4.252*	0.865
LPP or non-LPP area	1.236	0.713	1.103	0.791
Cox and Snell R^2			0.432	
Number			8,336	

† Treated as continuous variables
* Significant at P<0.05

Women from LPP provinces are not more likely to choose pills, IUDs, injectables, or sterilization over natural methods. This result is somewhat surprising given the LPP goal of promoting more effective methods of modern contraception. However, visiting a health facility within the past 12 months clearly encourages the use of pills (99 percent greater likelihood), IUDs (80 percent greater likelihood), and injectables (325 percent greater likelihood) over natural methods. Contact with fieldworkers, however, has no effect on preferences for natural methods in relation to other modern methods.

Media contact usually has little significant impact on the decision to use natural methods. The only exception is for sterilization, for which family planning messages broadcast through radio and television and read in newspapers promote greater use of sterilization than natural methods.

Finally, the frequency of spousal communication about family planning has little effect on the decision to use natural methods rather than other modern methods. The only instance in which communication between husbands and wives makes a difference is when deciding whether to use sterilization or natural methods. In relation to natural methods, women who discuss family planning once or twice with their husbands are 72 percent less likely to use sterilization, and with even more frequent communication, the odds of using sterilization fall by 78 percent.

3.4 Conclusions and Recommendations: Method Choice

The measures relating to contraceptive goals, competence, evaluation, and access are often important predictors of contraceptive method choice. The findings allow for the identification of important method choice patterns and the characteristics of underserved populations.

In general, older women who want to stop childbearing are more likely to choose permanent methods (sterilization), while younger women, who more often want to space rather than limit births, usually prefer reversible methods (especially pills). Higher parity women, who are more likely to have achieved the number of children they want, tend to favor modern methods (especially injections). Legally married women are more likely to use modern methods (especially natural methods, pills, and IUDs) compared with women living in consensual unions.

Catholic women are more likely to use IUDs and less likely to use injectables and traditional methods than non-Catholic women. Both modern and traditional method use is higher in urban than in rural areas. By region, use of the pill, the IUD, and injectables tends to be greatest in Mindanao, while use of condoms and female sterilization is highest in the National Capital Region. The reasons that injectable use is so low in the NCR relative to other regions should receive further attention from program managers and service provides. The lower use of sterilization in Mindanao compared with other regions may partly reflect differences in accessibility and cultural of religious practices.

Preference for natural methods is evident among more educated women and among those who have correct knowledge of the ovulatory cycle. Women who are working outside the home and who reside in wealthier households are more likely to use modern methods. The poorest 20 percent of households are significantly less likely to use pills, sterilization, and natural methods compared with the richest 20 percent of households. The provision of services to low-income couples should be given greater priority in the Philippine family planning program. Poorer households tend to have larger families and usually have fewer resources to allocate for the purchase of contraceptives.

Mass media and interpersonal communication are often considered powerful tools for information dissemination. However, these channels of communication have differing effects when used to reach target audiences. Results from this analysis generally show that hearing or viewing a message about family planning through mass media channels such as radio, television, and newspapers has little systematic effect on modern method use. Having read about family planning in newspapers actually reduces the likelihood of using most modern methods. These findings suggest that the content and efficacy of mass media messages designed to enhance the knowledge and use of family planning and other reproductive health services should be reassessed.

More personal forms of interaction have more influence on contraceptive method choice. Modern method use tends to be higher when there is more frequent spousal communication about family planning. The only exception is sterilization, for which more frequent spousal communication tends to discourage use. Male involvement and couple's decisionmaking in family planning are clearly areas that need further programmatic exploration.

Contact with fieldworkers and visits to health facilities tend to promote greater use of modern contraception, particularly reversible contraception. Medical personnel and health workers should take greater advantage of such opportunities to impart information about available contraceptive options. Facilities that are more accessible to clients also tend to promote greater use. Source of supply (public versus nonpublic) is important in predicting the use of injectables over other methods. Women who obtain care from public sector facilities are much more likely to use injectables, which implies that private sector providers are not promoting this method as effectively.

4 Contraceptive Discontinuation

The objective of this analysis is to provide more complete information on the nature and dynamics of contraceptive use in the Philippines. For example, who are the users most susceptible to discontinuing the use of contraceptives? What do women do after discontinuing the use of a method? Do women switch to another method or terminate use of a method altogether?

This analysis uses calendar data from the 1998 National Demographic and Health Survey (NDHS). This portion of the individual NDHS questionnaire provides information pertaining to the reproductive life of a woman covering the five-year period before the start of the survey (in this case, 1993-1998). It presents data on pregnancies, births, contraceptive use, contraceptive discontinuation, marriage/union formation, and geographical mobility. The use of the calendar for retrospective information is considered more reliable than other methods as it captures characteristics of respondents over time (Goldman, et al., 1990, as cited in Choe and Zablan, 1991).

The unit of analysis is the segment of use among women age 15-49. Use segments refer to uninterrupted periods of use and nonuse for a particular contraceptive method. However, segments that started three months before the time of interview, as well as those that started before the beginning of the five-year period, were excluded from the analysis since duration cannot be determined for these cases. The three-month cutoff was made to account for the possibility that women, although using a method, might be pregnant without knowing, thereby reducing the possibility of underestimating contraceptive discontinuation because of method failure. Censored cases, or those segments that are still in effect at the end of the five-year period, were considered to represent segments of longer duration (Perez and Tabije, 1996; Fathonah, 1996).

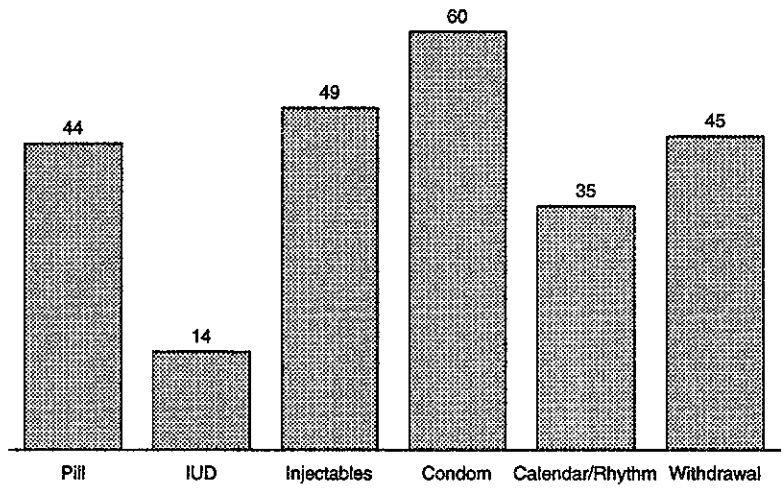
To identify the duration of use over time, contraceptive use segments (rather than individual women) are used as the unit of analysis. This procedure also provides information on the transition from one method to another. Moreover, as there is a wide array of contraceptive methods for women to choose from, analysis based on segments of use is not confined to only one or two methods.

The Dynpak software package developed by Macro International Inc. was used in matching the calendar data with respondents' background characteristics. This package also contains relevant analysis tools for determining data quality, discontinuation, switching behavior, and failure rates. In this analysis, Dynpak was employed to generate the probability of discontinuing contraceptive use and switching between methods over the period of one year (12 months). A total of 13,428 segments of use and nonuse were generated by Dynpak. Of these, 5,284 were segments of use for any method. Forty-six percent of these segments were censored, meaning that the method was still being used at the time of the survey, while 54 percent of the segments pertained to methods that were discontinued at some point during the five-year period before the survey.

4.1 Differentials in Contraceptive Discontinuation Rates

As pointed out earlier, two out of five women (40 percent) who use any method of contraception stop using the method after a year (NSO et al., 1999). This rate is higher than the 1993 figure of 34 percent (Perez and Tabije, 1996). Across methods, the rate varies, with condoms having the highest discontinuation rate, followed by injectables, withdrawal, the pill, the calendar/rhythm method, and IUDs (Figure 2). Noteworthy is the low discontinuation rate observed for IUDs, a method deemed more effective in preventing pregnancy.

Figure 2 Twelve-month Contraceptive Discontinuation Rates (%)



The median duration of use by method shows that IUDs have the longest mean duration of use (Figure 3). Half of all IUD users have already used the method for 36 months, followed by periodic abstinence with a median duration of 20 months. Pill use averages 15 months, while injectables are most often used for a year, or 4 cycles of use. The sporadic nature of condom use most likely partly explains its relatively short median duration of six months.

4.1.1 Sociocultural Factors

Variations in discontinuation and the median duration of use can also be observed when socio-cultural, demographic, economic, and other programmatic factors are considered.

Urban versus Rural Users. In the Philippines, the use of contraception has usually been higher in urban areas than in rural areas. In terms of contraceptive use dynamics, discontinuation among rural users is higher for almost all methods, with the exception of the pill and the calendar/rhythm method (Table 11).

Regional Variation in Discontinuation. Women from the National Capital Region generally have more prolonged use of more effective modern methods like IUDs, although 63.9 percent of injectable users from the region dropped out after the fourth cycle (12 months). Among pill users, more Visayan women drop out after 12 months than women in other regions. A large number of IUD discontinuers, however, are from Mindanao. Condom discontinuation among women from NCR is only 46 percent, compared with more than 60 percent for other regions.

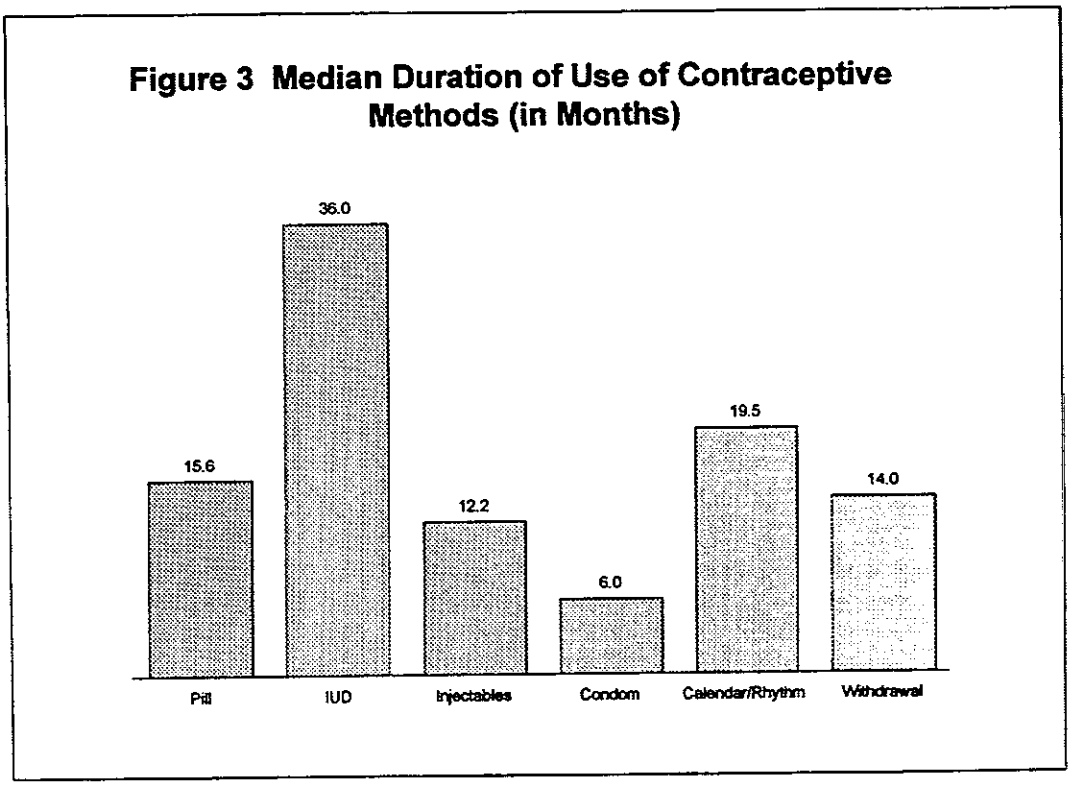


Table 11 Twelve-month discontinuation rates (DR) and median duration (MD) of use of contraceptive methods (in months), by selected sociocultural factors, 1998

	Pill		IUD[1]	Injectables		Condom		Calendar/ Rhythm		Withdrawal	
Sociocultural factor	DR	MD	DR	DR	MD	DR	MD	DR	MD	DR	MD
Residence											
Urban	47.0	14.0	12.0	47.7	12.5	58.4	5.5	41.2	15.8	44.7	14.3
Rural	39.4	17.3	16.2	50.5	11.8	63.1	7.1	39.8	15.8	44.5	13.8
Region											
Luzon	42.6	16.3	12.7	48.7	12.3	61.0	5.9	35.6	19.3	42.6	14.8
Visayas	49.7	12.1	9.6	44.1	13.2	66.8	5.7	36.9	18.1	44.9	13.2
Mindanao	39.8	21.3	18.3	19.9	12.0	66.0	4.6	34.9	21.5	52.6	10.7
NCR	44.7	19.2	0.0	63.9	9.4	45.7	13.9	33.3	19.4	43.8	15.6
Education											
Elementary	36.3	21.0	16.3	44.3	13.1	56.2	4.7	36.2	17.7	39.8	16.2
High school	43.8	15.4	11.9	55.3	9.8	66.4	5.4	39.0	15.7	41.9	14.3
College	48.8	12.6	15.2	45.9	12.8	55.2	9.6	45.7	14.4	54.0	10.4
Religion											
Catholic	43.8	15.4	12.8	47.7	12.5	60.8	5.6	40.6	15.7	45.2	13.7
Non-Catholic	42.3	16.7	19.9	54.6	10.7	57.4	8.8	40.4	16.6	42.2	15.4

[1] The median duration of use for IUDs is 36+ months.

Education. Past studies have pointed to the positive effect of education on contraceptive use. Women with higher educational attainment usually show greater preference for smaller families, thus increasing the likelihood of contraceptive use. However, this correlation does not necessarily mean longer durations of use for a particular method. Discontinuation rates by educational attainment are inconsistent. For pills, the

calendar/rhythm method, and withdrawal, education seems to have a positive effect on discontinuation. For example, discontinuation for these methods is highest among women with a college education.

Another pattern emerges for IUD use, with both ends of the educational distribution (elementary and college educated women) having relatively high discontinuation rates. Women with high school educations have the lowest discontinuation among IUD users, but they exhibit a greater tendency to discontinue condoms and injectables after a year of use.

Religion. Contraceptive use among Catholic women does not differ significantly with other religious groups. The discontinuation rate for non-Catholics is slightly higher for more effective methods such as the IUD and injectables.

4.1.2 Demographic Factors

Age. The propensity of younger women (age 15-29) to experiment is very much evident in their high discontinuation rates for most methods. Moreover, younger women tend to use methods for shorter periods. Duration of condom use, estimated at only 3.8 months, is especially low for younger women. This pattern suggests that younger women who are in the prime years of childbearing often do not have firm intentions for the regulation of their fertility, and as a result, may be at greater risk of contracting sexually transmitted diseases (Table 12).

Table 12 Twelve-month discontinuation rates (DR) and median duration (MD) of use of contraceptive methods (in months), by demographic factors, 1998

Demographic factor	Pill		IUD[1]	Injectables		Condom		Calendar/ Rhythm		Withdrawal	
	DR	MD	DR	DR	MD	DR	MD	DR	MD	DR	MD
Age											
15-29	42.9	15.0	18.4	52.2	10.5	68.6	3.8	49.4	12.2	51.8	11.5
30-49	44.3	16.2	10.4	43.4	13.4	54.0	10.0	34.1	20.3	37.6	16.9
Marital duration											
Under 5 years	50.0	12.1	12.1	53.0	9.6	79.1	2.5	57.6	9.5	59.3	8.8
5-9 years	38.2	20.4	17.9	52.5	11.1	61.3	6.3	41.6	14.9	45.7	13.4
10-14 years	48.2	13.3	10.1	50.7	11.8	46.3	13.1	32.7	18.8	34.0	17.5
15+ years	41.7	17.4	11.8	39.0	14.3	53.6	7.4	27.4	30.4	30.7	24.9
Parity											
0-1	41.4	17.8	10.3	52.8	9.3	67.6	2.8	48.5	12.7	52.3	11.1
2-3	44.3	14.8	17.9	49.1	12.3	61.9	5.9	42.8	15.0	47.5	13.1
4 or more	43.4	15.6	10.4	48.2	12.4	52.8	10.4	33.6	17.9	36.0	16.0
FP intent											
To space	47.0	13.3	9.8	42.4	14.0	68.4	4.5	52.2	11.3	56.6	10.2
To limit	38.6	23.4	20.0	54.6	8.8	50.1	11.9	24.0	32.2	25.9	27.4
Husbands' desire for children											
Same as wife's	40.7	17.7	14.2	46.9	12.8	58.2	8.0	39.9	16.6	45.6	13.6
Wants more	47.2	14.4	14.7	56.2	8.9	64.1	5.4	40.8	15.2	43.0	14.9
Wants fewer	55.3	6.7	12.6	38.8	15.2	67.0	3.2	43.0	14.5	40.8	15.6
Husband approves of FP											
Yes	42.6	16.5	13.9	47.1	12.6	59.8	6.2	40.1	15.9	45.4	13.8
No	60.9	6.6	9.3	52.9	7.0	73.8	9.0	32.2	18.0	35.0	15.6
Discussed FP with partner											
Never	62.9	5.2	12.7	49.1	12.6	27.2	17.6	44.8	19.9	45.4	16.2
Once	37.8	22.1	14.5	50.2	11.9	61.2	5.5	38.9	16.4	44.4	14.0
Often	44.4	15.1	14.0	46.6	12.7	63.4	5.7	40.8	15.6	44.8	13.9

[1] The median duration of use for IUDs is 36+ months.

Marital Duration, Parity, and Family Planning Intent. High rates of discontinuation are also common among women who are in their early years of marriage, and as such, are yet to achieve their desired family size. A shift toward longer durations of use and lower discontinuation occurs when these women attain their desired number of children. Contrary to expectation, there seems to be less reliance on more effective methods for those aspiring to limit their childbearing. Higher discontinuation rates are observed among limiters for both injectables and IUDs compared with women who are spacers.

Husbands' Attitudes toward Family Planning. Another important but often overlooked component of fertility management is the role husbands play in family planning decisionmaking (Zablan, 1997; UN, 1996). It is important to note that Filipino men generally approve of family planning and most are open to discussing it with their partner. However, these favorable attitudes do not necessarily translate to actual practice—as suggested by the low levels of condom use and male vasectomy.

Sixty percent of women with a husband who does not approve of family planning discontinue pills after a year. This finding compares with only 42.6 percent who discontinue if their husband approves of family planning. A particularly high rate of discontinuation (73.8 percent) is observed among women who rely on condoms and have a husband who disapproves of family planning. However, women with a husband who disapproves of family planning report slightly longer durations of use. Other methods (IUDs, calendar/rhythm, and withdrawal) are less likely to be discontinued if husbands do not agree with family planning. Since the use of these methods may be less apparent to husbands (IUDs and calendar/rhythm) or more acceptable (withdrawal), it may not be surprising that women with a husband who does not approve of family planning are less likely to discontinue these methods. However, in general, the findings are inconclusive in assessing the overall effect of husbands' attitudes on contraceptive discontinuation, especially given the small percentage of husbands who actually disapprove of family planning (less than 3 percent).

Discontinuation rates tend to be lower and durations of use higher if couples agree on the number of children they want. For example, 40.7 percent of women discontinue pills after 12 months if they want the same number of children as their husband, compared with 47.2 percent when the husband wants more children than his wife and 55.3 percent when the husband wants fewer children than his wife. A similar pattern is clearly in evidence for condoms. What is apparent is that dissonance between husband and wife pertaining to the desired number of children tends to be associated with greater discontinuation.

Couples who use pills and who discuss family planning more often have lower discontinuation and longer use durations. Pills are used for an average of 5.2 months among couples who never discuss family planning, but an average of 22.1 months if they discuss family planning at least once. Agreement between spouses clearly appears to engender commitment and cooperation for continued use. However, the frequency of spousal communication does not appear to be systematically related to discontinuation and duration of use for other methods.

4.1.3 Economic Factors

Two economic variables are considered: 1) whether the woman is working (regardless of the type of work) and 2) the economic position of her household measured by a wealth index that combines household assets, structural housing characteristics (such as floor and roof materials), and access to electricity and potable water (Table 13).

Labor Force Participation. Being in the labor force and contributing to household resources enhances women's decisionmaking capacity, not only pertaining to family matters but also in almost all spheres of life (Zablan, 1997). Women's participation in the labor force must also be considered as an avenue for socialization. Being employed provides women with the chance to interact more effectively, which could help expand general awareness and knowledge of reproductive health and enhance women's decisionmaking power.

Table 13 Twelve-month discontinuation rates (DR) and median duration (MD) of use of contraceptive methods (in months), by selected economic factors, 1998

Economic factors	Pill			IUD[1]			Injectables			Condom	
	DR	MD		DR			DR	MD		DR	MD
Working											
Yes	41.3	17.8	13.0	42.4	13.6	54.2	10.4	36.8	18.4	40.2	16.0
No	45.3	14.4	14.7	55.2	10.4	65.5	4.9	43.9	14.3	48.0	12.7
Wealth index											
Poorest 20 percent	37.8	16.4	16.8	50.5	11.9	62.3	5.3	33.6	20.9	49.3	12.2
20-40 percent	43.3	15.6	18.8	50.8	11.8	70.8	2.6	32.8	17.1	43.3	13.9
40-60 percent	37.1	20.9	11.2	47.3	12.4	67.3	6.2	39.8	16.8	42.2	14.5
60-80 percent	47.5	13.5	10.3	40.6	14.9	59.4	5.7	38.1	18.9	47.4	13.1
Richest 20 percent	41.5	19.7	13.4	57.4	10.4	41.9	14.8	29.6	26.8	40.6	17.2

[1] The median duration of use for IUDs is 36+ months.

Working women have longer median durations of use for all methods, which implies higher discontinuation among those not currently working. This finding likewise bolsters the claim that working women are in greater need of contraception since the occurrence of another pregnancy not only poses an additional responsibility but could also impinge on employment and career opportunities.

Household Wealth Index. Discontinuation of more effective methods, such as IUDs, and condoms (which afford protection against sexually transmitted diseases), is higher among women who belong to less advantaged households. For example, 62.3 percent of women belonging to the poorest 20 percent of households stop using condoms after one year, compared with 41.9 percent of women from the richest 20 percent of households. Pill discontinuation is similarly low among and women from the poorest 20 percent of households and from the middle 40 to 60 percent of households. Discontinuation among women from the richest 20 percent of households is also elevated for some methods (e.g., pills and injectables). These economically advantaged women generally have more options or choices and may therefore more readily switch methods if they are not satisfied with their current contraceptive.

4.1.4 Programmatic Factors

For nearly three decades, information and education campaigns have been implemented to highlight the importance of family planning for individuals and for society at large. The mass media are heavily relied on as purveyors of this information. Print media, such as newspapers, posters, and brochures do not have the time limitation of television and radio. Family planning campaigns that use these channels may allow for more focused and incisive discussion of issues. However, print media tends to have less influence among Filipinos than television and radio. So how do these considerations figure in the contraceptive use dynamics of Filipino women?

Radio and television. The results presented in Table 14 indicate that there is little systematic variation in discontinuation rates for most methods in relation to contact with family planning radio and television messages. Pill discontinuation is somewhat higher among women who have not heard family planning messages on the radio. Condoms are more likely to be discontinued if there is no contact with radio and television information. However, radio and television contact appears to have no clear pattern of association with the duration of use.

Table 14 Twelve-month discontinuation rates (DR) and median duration (MD) of use of contraceptive methods (months), by selected programmatic factors, 1998

Programmatic factor	Pill		IUD[1]			Injectables			Condom		
	DR	MD		DR		DR	MD		DR	MD	
Heard FP on radio											
Yes	42.6	16.3	15.5	48.4	12.4	58.6	6.4	35.1	19.3	43.9	14.1
No	46.2	14.0	9.8	51.1	11.4	63.1	5.8	35.9	19.9	45.9	13.7
Heard FP on television											
Yes	44.1	15.0	14.0	50.6	11.8	57.2	7.4	36.8	18.1	44.4	14.1
No	41.3	16.9	14.8	45.4	13.1	67.7	4.6	31.8	22.4	44.9	13.4
Read FP in newspaper											
Yes	47.5	13.3	17.2	49.1	12.3	56.1	8.2	37.5	17.8	47.3	13.3
No	40.1	18.2	11.8	49.3	12.2	64.1	5.2	33.3	21.4	42.5	14.4
Read FP on poster											
Yes	44.5	14.9	15.2	45.0	13.2	60.4	5.5	36.8	18.6	50.6	11.8
No	42.4	16.2	13.2	53.4	11.2	59.9	8.0	33.6	20.2	39.9	15.4
Read FP in brochures											
Yes	45.7	14.2	14.2	39.6	14.5	60.2	5.8	39.3	17.3	49.3	12.3
No	42.0	16.8	14.3	54.1	10.7	60.0	6.6	32.2	21.0	41.9	14.9
LPP area											
Yes	41.4	17.1	14.3	46.4	12.9	68.2	6.1	36.0	20.1	45.4	13.6
No	48.1	13.1	14.1	58.8	9.6	45.1	14.5	33.7	18.4	43.1	14.8

[1] The median duration of use for IUDs is 36+ months.

Print media. Women who have learned about family planning from newspapers tend to exhibit higher probabilities of discontinuing use after 12 months. This pattern is evident among pill, IUD, calendar/rhythm, and withdrawal users. Condom discontinuation, while relatively higher than discontinuation of other methods, is further elevated if women have not read about family planning in newspapers. Other print media (posters and brochures) do not appear to be important factors in influencing discontinuation or duration of use since little systematic variation can be identified. The only method that seems to benefit from the use of posters and brochures is injectables, for which higher discontinuation and lower use durations are noted among women who have not had contact with family planning messages from these media sources.

Local performance program. The findings in Table 14 also show that residence in an LPP province is generally associated with lower discontinuation and longer use durations for modern methods. In particular, women in LPP provinces are more likely to use injectables for longer duration compared with women from non-LPP provinces.

The one notable exception to this pattern is condom use. Women in LPP areas have considerably higher condom discontinuation after 12 months (68.2 percent compared with 45.1 percent) and shorter durations of use (6.1 months compared with 14.5 months). Given the importance of condoms in controlling the spread of sexually transmitted diseases, LPP program managers clearly need to give greater attention to improving the accessibility and effective use of condoms.

4.2 Contraceptive Switching Behavior in the Philippines

An equally important issue in the study of contraceptive dynamics is the use status of women after the discontinuation of a method. Table 15 presents 12-month switching rates for four possible outcomes after discontinuation: no need for contraceptives, switch to another modern method, switch to traditional methods, or discontinue using any method altogether. These switching patterns are derived using two measures from the 1998 NDHS calendar data; namely, contraceptive status after discontinuation and reasons for discontinuation.

Table 15 Twelve-month switching rates by method, 1998

Method discontinued	No need	Switched to modern method	Switched to traditional method	Discontinued use of any method
Pill	17.9	4.0	7.4	13.7
IUD	2.2	5.7	2.8	2.9
Injectables	6.5	15.4	7.4	20.2
Condom	17.8	11.0	19.2	12.0
Periodic abstinence	26.5	4.5	1.9	2.0
Withdrawal	3.9	7.6	2.4	30.9

Note: Reasons for discontinuation were the following: method failure, wants to get pregnant, infrequent sex, separated/widowed, and subfecund.

4.2.1 Switching to Modern Methods and Traditional Methods

As is shown in Table 15, switching behavior after discontinuation varies considerably by method. Women who discontinue IUDs and injectables are likely to switch to another modern method, which suggests that they may be highly motivated to restrict fertility. However, it should be noted that many injectable users also discontinue the use of any method rather than switch to other modern methods.

Pill users are more likely to say they have no need for contraception or to discontinue use rather than switch to modern or traditional methods. (The no-need category includes women who discontinue use of a method owing to the desire to become pregnant, method failure, separation, widowhood, and infecundity.) This result may be partly because many pill users are spacing births and may often discontinue to have a child. Former condom users are more likely to say they have no need for contraception, switch to traditional methods, or discontinue use rather than adopt a modern method. Traditional methods provide some transitory protection and may seem like logical choices after discontinuing pills and condoms.

However, traditional method users more readily say that they have no further need for contraception (users of periodic abstinence) or discontinue use altogether (users of withdrawal). Only 4.5 percent of women who discontinue periodic abstinence switch to a modern method and only 1.9 percent accept a traditional method. Among withdrawal users, 7.6 percent switch to modern methods, while only 2.4 percent use another traditional method. It should be noted that the effectiveness of periodic abstinence and withdrawal largely depends on the cooperation of husbands. This fact may partly explain why women who discontinue traditional methods are somewhat more likely to switch to modern contraception than adopt another traditional method.

4.2.2 Discontinuation of Methods

High rates of discontinuation are common for withdrawal, followed by injectables, pills, and condoms. Withdrawal is generally less effective in preventing unwanted conception and requires the husband's cooperation. Difficulty in getting the husband to use withdrawal effectively could be one reason for the high rate of discontinuation for this method. In the case of pills and injectables, most women discontinue to become pregnant, so it is understandable that discontinuation levels are relatively high. Side effects that some women experience may also partially account for why 20.2 percent of injectable users and 13.7 percent of pill users discontinue the use of any method after 12 months.

4.2.3 Method Switching Behavior across Subgroups of Women

Tables 16, 17, and 18 report switching behavior among different subgroups of women who discontinue the use of pills, injectables, and periodic abstinence. IUDs, condoms, and withdrawal are not presented owing to the shortage of cases for the categories of some background variables.

Table 16 Twelve-month switching rates among pill users, by background characteristics, 1998

Background characteristic	No need	Switched to modern method	Switched to traditional method	Discontinued use
Age				
15-29	13.8	4.6	8.4	15.9
30-49	21.3	2.2	8.6	11.3
Residence				
Urban	19.7	3.1	10.8	13.5
Rural	14.6	3.7	6.8	13.8
Region				
Luzon	19.8	1.7	6.8	14.4
Visayas	19.9	5.0	6.9	17.6
Mindanao	12.8	6.2	7.8	12.8
NCR	16.5	1.8	16.4	10.0
Education				
Elementary	10.1	3.3	9.8	13.1
High School	17.1	3.1	7.6	15.8
College	24.0	3.8	9.6	11.6
Family planning intent				
To space	18.8	3.5	8.9	15.7
To limit	15.7	3.2	8.5	11.2
Wealth index				
Poorest 20 percent	11.7	4.4	6.8	14.5
20-40 percent	12.0	3.2	8.3	19.4
40-60 percent	14.1	3.8	8.7	12.8
60-80 percent	27.1	2.3	8.5	12.1
Richest 20 percent	18.5	4.3	10.4	8.3
LPP area				
Yes	18.0	4.1	5.8	13.5
No	16.4	1.9	15.2	14.4

Table 17 Twelve-month switching rates among injectable users, by background characteristics, 1998

Background characteristic	No need	Switched to modern method	Switched to traditional method	Discontinued use
Age				
15-29	6.3	15.8	7.8	26.3
30-49	6.6	14.2	7.8	15.4
Residence				
Urban	7.7	18.2	5.8	16.5
Rural	5.3	12.0	9.5	24.5
Region				
Luzon	6.9	10.2	7.7	24.5
Visayas	7.7	11.9	9.8	15.7
Mindanao	4.7	21.9	4.9	19.3
NCR	7.3	21.9	14.0	20.9
Education				
Elementary	5.0	12.9	7.5	19.4
High School	7.8	16.2	6.4	25.8
College	6.3	16.0	10.6	13.6
Family planning intent				
To space	9.9	17.2	6.3	25.6
To limit	3.8	13.2	9.0	17.1
Wealth index				
Poorest 20 percent	8.6	11.9	5.3	25.7
20-40 percent	5.3	14.0	3.4	28.7
40-60 percent	11.4	18.6	5.4	12.8
60-80 percent	1.5	7.1	15.0	17.1
Richest 20 percent	5.5	27.6	10.3	15.0
LPP area				
Yes	6.9	13.7	6.8	19.5
No	4.8	18.8	11.3	24.6

As is shown in Table 16, discontinuation is more common among younger women (15.9 percent), women who are spacing rather than limiting births (15.7 percent), and residents of non-LPP areas (14.4 percent). In terms of socioeconomic status, women living in poorer households (the poorest 40 percent of households) and women with less education have the highest rate of pill discontinuation.

The findings also show that switching to traditional methods after discontinuing pills is more common in all subgroups of women, but the preference for traditional over modern methods is most pronounced among urban residents, women residing in NCR and non-LPP areas, and women living in the richest 20 percent of households.

Discontinuation of use after the discontinuation of injectables is higher among younger women (26.3 percent), women who reside in rural areas (24.5 percent), women from Luzon (24.5 percent), women with a high school education (25.8 percent), women from the poorest 20-40 percent of households (28.7 percent), and women living in non-LPP provinces (24.6 percent). Among women who discontinue injectables, switching to modern methods far exceeds the movement to traditional methods, most notably among younger women, urban residents, women from Mindanao, women with a high school education, women who are spacing rather than limiting their fertility, and women who reside in LPP areas. These results complement earlier findings on overall switching patterns between methods. In effect, women who are using more effective methods of contraception are likely to seek protection from equally effective methods rather than switch to traditional methods.

Women who discontinue periodic abstinence display a distinct pattern of switching behavior (see Table 18). In comparison with pill discontinuation, there is somewhat greater switching to modern or traditional methods and less discontinuation of any use. Furthermore, among women who switched methods, there is an obvious preference for modern methods in all subgroups of women. This pattern is particularly notable among women who are older, who are residents of urban areas, who live in the NCR, who have more schooling, and who space rather than limit births. Similar preferences for modern methods are observed for various economic strata, with the exception being women who belong to the poorest 20 percent of households, for whom insignificant differences exist between those switching to traditional and modern methods (2.4 percent versus 2.8 percent).

In general, high rates of discontinuation after 12 months of use typify the three methods under consideration; namely, 1) a modern but more effective method (injectables), 2) a modern but slightly less effective method (pills), and 3) a traditional method with a greater rate of failure (periodic abstinence). The high rate of discontinuation for injectables may partly stem from the fact that women are more likely to experience side effects when using injectables. To some extent, the same complaint extends to other hormonal methods such as pills. However, the high discontinuation rate for periodic abstinence is not surprising since there is greater risk of failure with this method.

Discontinuation of contraceptive use is generally more prevalent among young women, women from rural areas, and women residing in non-LPP provinces. This pattern highlights important considerations in ensuring continued contraceptive use by women: supply and accessibility. Women in rural areas tend to have more limited contraceptive options than women in urban areas. The LPP program tries to correct this problem by providing health services and supplies to remote areas of the country. Women who benefit from such efforts are less likely to discontinue contraceptive use. Moreover, women who have the economic resources to pay for methods tend to use them for longer periods or switch to other modern methods.

With regard to switching behavior, users of effective modern and traditional methods are likely to accept other modern methods after discontinuing their current method. However, pill users have a greater tendency to choose traditional methods over other modern methods when discontinuing use. This behavior is more pronounced among women from the NCR, urban areas, and non-LPP areas as well as women who belong to the richest 20 percent of households.

Table 18 Twelve-month switching rate among periodic abstinence users, by background characteristics, 1998

Background characteristic	No need	Switched to modern method	Switched to traditional method	Discontinued use
Age				
15-29	34.1	4.7	3.0	2.9
30-49	22.3	4.1	1.5	1.8
Residence				
Urban	27.3	5.5	1.6	2.4
Rural	25.1	2.8	2.5	1.9
Region				
Luzon	26.9	2.4	2.5	2.6
Visayas	27.9	4.4	1.5	2.5
Mindanao	25.8	5.0	2.1	2.1
NCR	23.7	6.4	2.1	1.1
Education				
Elementary	21.7	2.8	2.0	2.9
High School	26.2	4.2	2.2	1.8
College	29.1	5.3	1.9	2.1
Family planning intent				
To space	35.3	5.7	2.2	2.5
To limit	15.0	2.8	1.8	1.8
Wealth index				
Poorest 20 percent	26.4	2.8	2.4	1.8
20-40 percent	23.4	5.9	0.7	1.0
40-60 percent	32.1	5.5	0.4	1.3
60-80 percent	27.3	7.0	1.8	2.0
Richest 20 percent	20.5	1.0	3.9	3.7
LPP area				
Yes	27.0	4.1	2.0	2.7
No	24.8	4.8	2.1	0.9

4.3 Conclusions and Recommendations: Contraceptive Discontinuation and Method Switching

While program efforts have continuously been made to increase contraceptive adoption, initiatives that will ensure better use compliance and longer durations of use have not been as effective. If these topics are not given due attention, many women participating in the family planning program may be at greater risk for having an unintended pregnancy. While there has been an observed increase in preference for modern methods in the Philippines in recent years, high method discontinuation and discontinuation of use after a year is also common, thus weakening any possible protection from unintended pregnancy that modern methods provide. Studying the patterns and determinants of discontinuation and method switching allows the identification of women who are at risk of unintended pregnancies, which in turn could help program managers in designing appropriate strategies that will suit women's specific needs.

The study shows that younger women are more likely to be interested in spacing than limiting their children and therefore may be less motivated to use contraception continuously. This finding highlights the fact that younger couples have different reproductive health needs and are likely to exhibit more irregular contraceptive use. A distinct set of policy interventions, programs, and messages should be developed for younger clients.

Despite claims from past studies that higher education leads to greater awareness and knowledge and increased use of contraception, results from this analysis suggest that higher educational attainment does not necessarily ensure longer durations of use. In fact, more educated women tend to use contraceptives for shorter durations. One possible explanation for this finding is that by choosing to spend more time in school, women wish to delay marriage and childbearing. However, once they enter into union, they tend to have children more rapidly and use contraception for shorter durations. In a more positive light, results also show that more educated women tend to choose more effective methods.

Similarly, having the means to easily afford family planning services does not ensure continued and effective use. This study found that women in more advantaged households have higher discontinuation rates for pills and injectables. However, IUD and condom discontinuation is somewhat higher among women living in poorer households.

With regard to the contraceptive use of working women, lower discontinuation rates are noted for most methods, although only a small difference exists in the rates for IUD use between working and nonworking women (13.0 percent versus 14.7 percent). This finding is to be expected, as many Filipino women believe that with an IUD inserted, hard manual work is not advisable. This belief is held particularly among women in rural areas whose main occupation is agrarian farm work.

The provision of services to low-income couples should be given greater priority in the Philippine family planning program. Poorer households tend to have larger families and usually have fewer resources to allocate for the purchase of contraceptives. This study shows that efforts to identify those women who are in need of family planning services and to make services more accessible can lead to more productive outcomes.

Spousal communication on family planning affects the decision on whether to continue using a method. In some cases (e.g., pill use), frequent discussion of family planning issues between husband and wife lessens the probability of discontinuation. Likewise, disagreement between couples about the desired number of children increases the probability of discontinuation. Greater efforts should be made to promote male involvement in the country's reproductive health programs.

In terms of the mass media's effect on contraceptive use, it appears that radio contact may be somewhat effective in promoting prolonged use of most modern methods. Furthermore, women who have heard family planning messages on the radio (with the exception of IUDs) have lower discontinuation rates than women with no radio contact. The use of print media for family planning messages can also be effective for some methods. For example, this study shows that prolonged use of injectables may more likely occur among women who have learned about family planning from posters and brochures. However, the impact of family planning messages through various media channels is generally weak and inconsistent. These findings suggest that it might be advisable to reassess the content, frequency, and mode of delivery for IEC efforts.

One other important variable that has a significant effect on the duration of use (at least for pills and injectables) is the ongoing effort to promote reproductive health at the local level through the LPP program. Pill and injectable discontinuation is lower and durations of use longer in LPP areas. However, condom use is generally less effective in LPP areas, which may imply that the LPP program may not be giving adequate attention to services and information for male clients.

With regard to patterns of method switching after discontinuation, women who discontinue IUD and injectable use are likely to switch to another modern method, which suggests that they may be highly motivated to restrict fertility. However, it should be noted that many injectable users discontinue use of any

method rather than switch to another modern method. This pattern may be partly a result of the side effects that women experience when using injectables.

Pill users are more likely to say they have no need for contraception or to discontinue use rather than switch to modern or traditional methods. This result may be partly because many pill users are spacing births and may often discontinue to have a child. Former condom users are more likely to say they have no need for contraception, switch to traditional methods, or discontinue use rather than adopt a modern method. Traditional method users more readily say that they have no further need for contraception (users of periodic abstinence) or discontinue use altogether (users of withdrawal). To promote more effective use of contraception in the Philippines, greater efforts need to be made to encourage women to switch to modern methods rather than traditional methods or outright discontinuation of contraception.

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